

CLAIMS

What is claimed is:

1. A method of forwarding data packets according to an order of forwarding, comprising:
5 generating a resource request corresponding to a first data packet that is first according to said order;
generating a first resource request corresponding to a second data packet that follows said first data packet according to said order;
10 delaying generation of a subsequent resource request for said second data packet for a specified time period; and
generating a second resource request for said second data packet before said specified time period is due to expire when said first data packet is forwarded such that a delay attributable to said specified time period is lessened.
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2. The method as recited in Claim 1 wherein a resource request comprises a buffering request.
- 20 3. The method as recited in Claim 1 comprising:
setting said specified time period to zero when said first data packet is forwarded.
4. The method as recited in Claim 1 wherein said data packets
25 are queued in a buffer according to said order of forwarding.
5. The method as recited in Claim 1 wherein said generating of said second resource request for said second data packet is triggered by said second data packet transitioning to first in said order.
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6. The method as recited in Claim 1 wherein said specified time period is provided in a reply to said first resource request for said second data packet.

7. The method as recited in Claim 1 comprising:
generating said second resource request for said second data packet
upon expiration of said specified time period.

5 8. A method of forwarding data packets, comprising:
maintaining said data packets in a queue according to an order in
which said data packets will be forwarded;
generating a first buffer request corresponding to a data packet not at
the head of said queue;
10 specifying a first wait period during which a subsequent buffer request
for said data packet is not to be generated; and
reducing said first wait period when said data packet transitions to the
head of said queue.

15 9. The method as recited in Claim 8 wherein said first wait period
is reduced to zero when said data packet transitions to the head of said
queue.

20 10. The method as recited in Claim 8 comprising:
generating a second buffer request for said data packet in response
to said data packet transitioning to the head of said queue, wherein said
second buffer request is generated before said first wait period is set to
expire.

25 11. The method as recited in Claim 8 comprising:
generating a second buffer request for said data packet upon
expiration of said first wait period.

30 12. The method as recited in Claim 11 comprising:
receiving a reply to said second buffer request, wherein a second wait
period is specified in said reply.

35 13. The method as recited in Claim 12 wherein said second wait
period is different than said first wait period.

14. The method as recited in Claim 8 wherein said first wait period is specified in a reply to said first buffer request.

5 15. An apparatus comprising:
an inbound memory adapted to store data packets to be forwarded to an outbound memory, said data packets to be forwarded according to an order; and

10 a processor coupled to the inbound memory and which generates a first resource request corresponding to a data packet stored in said inbound memory and not first in said order, said processor also adapted to delay generating a subsequent resource request for said data packet for a specified time period, wherein said processor also generates a second resource request for said data packet before said specified time period is due to expire upon said data packet becoming first in said order.

15 16. The apparatus of Claim 15 wherein said processor sets said specified time period to zero when said data packet transitions to first in said order.

20 17. The apparatus of Claim 15 wherein said processor manages said order of forwarding.

25 18. The apparatus of Claim 15 wherein said specified time period is set to zero in response to said data packet transitioning to first in said order.

30 19. The apparatus of Claim 15 wherein said second resource request is generated in response to said data packet transitioning to first in said order.

20. The apparatus of Claim 15 wherein said specified time period is provided in a response to said first resource request.

35 21. The apparatus of Claim 15 wherein said processor generates a resource request for said data packet when said specified time period expires.